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## GENERAL CARDIOLOGY: HYPERTENSION, PREVENTION AND LIPIDS

**VACCINATION SEROLOGY STATUS (NON-PNEUMOCOCCAL AND NON-INFLUENZA) AND CARDIOVASCULAR MORTALITY: INSIGHTS FROM NHANES III**

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F

Monday, April 04, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Preventing Heart Disease on Every Continent

Abstract Category: 17. Risk Reduction and Rehabilitation

Session-Poster Board Number: 1079-306

Authors: *Aditya S. Bharadwaj, Ankit Rathod, Apurva Badheka, Vikas Veeranna, Sony Jacob, Luis Afonso, Wayne State University/ Detroit Medical Center, Detroit, MI*

**Background:** Role of vaccinations in prevention of cardiovascular mortality is unknown. Most prior studies have analyzed pneumococcal or influenza vaccination with contradicting results. No prior study has investigated tetanus, measles, rubella or diphtheria vaccinations.

**Methods:** The public dataset of the National Health and Nutrition Examination Survey III (NHANES III) between the years 1988-1994 was used. We included patients >18 years with data on antibody titres for tetanus, measles, rubella or diphtheria (n= 6776). Protective titers were analyzed as >0.10IU/ml, >0.15IU/ml and ≥10U for diphtheria, tetanus and mumps respectively per standard protocols. Univariate and multivariate analyses were carried out using SAS 9.1. Baseline differences in traditional cardiovascular risk factors, CRP and insurance status were adjusted in the multivariate Cox proportional hazard regression. Two separate models were analyzed using immune status. First model included immune status as continuous variable (0, 1, 2, 3 or 4). The second model analyzed immune status as positive for two or more vaccinations versus none or single positive titer.

**Results:** Only 31.11% of our population had recommended protective titers for all vaccines. 2.4% had none or only singly positive titer. The number of cardiovascular deaths on follow up was 527 (7.78%). Vaccination status was not associated with cardiovascular mortality on both univariate and multivariate (HR = 0.96 C.I = 0.85-1.09, p = 0.55) analyses using both models.

**Conclusion:** Tetanus, measles, rubella or diphtheria vaccinations (either singly or in combination) do not appear to be associated with cardiovascular mortality in a nationally representative cohort.